Chapter 4
Flood Proofing Classification of Spaces Below the Regulatory Flood Datum

Section 400.0 Scope

Sec. 400.1 General: The flood proofing classification of a space is determined by the degree of protection required under these Regulations to permit its intended use. (Classification of entire buildings or structures for administrative and posting purposes, which is based jointly on the flood proofing classes of its constituent spaces and the means by which their classifications are obtained, is explained in 210.0.) The flood proofing class of a space for which temporary placement or contingent protection measures are approved assumes that these measures are in effect during a flood and defines the resulting relationship of protection to use.

Sec. 400.2 Assignment of Flood Proofing Classes: Assignment is made by the Owner at the time of application for a permit and is subject to the approval of the Building Official as indicated in 205.0. Every space of an improvement in a Special Flood Hazard Area which impinges in whole or part upon the RFD shall have a flood proofing class assigned to it, and all requirements associated with a flood proofing class shall be met by the space to which they apply in addition to all other requirements of these Regulations and the Building Code.

Section 401.0 Descriptions of Flood Proofing Classes

Sec. 401.1 Classifications: The following descriptions of the five flood proofing classes are approximate and general; more precise specification of the requirements associated with each class are set forth in Table 2 of Section 402.0.

Sec. 401.2 Completely Dry Spaces (W1): These spaces shall remain completely dry during flooding to the RFD; walls shall be impermeable to passage of water and water vapor. Permitted contents and interior finish materials are virtually unrestricted, except for high hazard type uses or human habitation as provided in 209.3. Structural components shall have the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.

Sec. 401.3 Essentially Dry Spaces (W2): These spaces shall remain essentially dry during flooding to the RFD; walls shall be substantially impermeable to water, but may pass some water vapor or seep slightly. Contents and interior finish materials are restricted when hazardous or vulnerable under these conditions. Structural components shall have the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. W1 and W2 flood proofing classes herein are comparable to the NFIP flood proofing standards in CFR 60.3 (c)(3)(ii), 60.3 (c)(8)(ii), and 60.6 (c)(2)(i).

Sec. 401.4 Spaces Intentionally Flooded With Potable Water (W3): These spaces will be flooded internally with potable water provided by the Owner in order to maintain the building's structural integrity by equalizing pressures on structural components during flooding to the RFD; walls shall be sufficiently impermeable to prevent the passage, infiltration or seepage of contaminated floodwaters. Contents and interior finish materials are restricted when hazardous or vulnerable under intentional flooding conditions. This is also known as wet flood proofing.

Sec. 401.5 Spaces Flooded With Floodwater (W4): These spaces will be flooded with floodwater (contaminated) by automatic means, or are otherwise partially exposed to the unmitigated effects of the flood. Although there are minimal structural requirements to be met for walls and other structural components, contents and interior finish materials are restricted to types which are neither hazardous nor vulnerable to loss under these flooding conditions. (Most spaces in existing buildings would have this classification if provided with a suitable automatic flooding system. Carports, loading platforms, open crawl spaces, porches, and patios would generally fall into this classification. This is also known as wet flood proofing.

Sec. 401.6 Non-Flood Proofed Spaces (W5): A non-flood proofed space in an existing building or structure is defined as a space which fails to meet the requirements of any of the above described classifications.

401.7 Flood Proofing and the National Flood Insurance Program: National Flood Insurance Program regulations require that new and substantially improved residential structures be elevated to or above the base flood elevation. Non-residential structures may be flood proofed provided that the structure is watertight with walls below that elevation substantially impermeable to floodwaters. Structures that do not meet these requirements are generally violations of local flood plain management regulations and can be subject to extremely high flood insurance premiums. The FEMA does recognize that there may be other circumstances where a "lesser degree" of flood proofing including "wet flood proofing" may be appropriate. Enclosures below elevated buildings that are used solely for parking, building access, or limited storage can be wet flood proofed in accordance with NFIP regulations. Other examples include small accessory structures, some large commercial or industrial buildings containing low-damage uses, and certain agricultural structures. In these situations, wet flood proofing is permitted only upon issuance of a variance by the community and only if the structure meets the variance criteria in 44 CFR 60.6 (a) of the NFIP regulations. Wet flood proofing may also be appropriate as a means of reducing damages to existing flood-prone structures.

Section 402.0 The Space Classification Chart

Sec. 402.1 General: Table 2 indicates the various degrees of protection required to permit uses of spaces for each flood proofing class. Although spaces must meet the requirements shown for each element of flood proofing, the chart in itself shall not be construed as being exhaustive with respect to all requirements imposed by these Regulations. In disputes arising over the interpretation of this chart, the written provisions of these Regulations shall be considered as definitive. Succeeding chapters provide interpretive definitions for each element of flood proofing.

Sec. 402.2 Separation of Spaces With Different Flood Proofing Classifications: Any two adjacent spaces below the RFD having different flood proofing classes shall be separated by a barrier meeting the requirements for the space with the lower-numbered classification. In addition, any opening below the RFD between two adjoining spaces shall be provided with a closure meeting the requirements for the space with the lower-numbered classification.

Table 2

SPACE CLASSIFICATION CHART

FLOOD-PROOFING CLASSIFICATION OF SPACES									
	MINIMUM REQUIREMENTS								
Flood-Proofing Classes	Water-Proofing	Struc-tural Loads	Closure of Openings	Internal Flooding & Drainage	Flooring	Walls and Ceilings	Contents	Electrical	Mechanical
W1 Completely Dry	Type A	Class 1	Type 1	See Chapter 8	Class 1	Class 1	Class 1	See Chapter 12	See Chapter 13
W2 Essentially Dry	Type B	Class 1	Type 1		Class 2	Class 2	Class 2		
W3 Flooded with Pota-able Water	Type A	Class 2	Type 3		Class 3	Class 3	Class 3		
W4 Flooded with Flood Water	Type C	Class 3	Type 4		Class 4	Class 4	Class 4		
W5 Non-Flood-Proofing	–	–	Type 5		Class 5	Class 5	Class 5		